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Intellectualization of the management processes at the enterprise of automotive industry

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Abstract

© 2018 Association for Computing Machinery. Complex production systems, such as the trucks manufacturing, require the intellectualization of processes. Introduction of smart technologies (Industry 4.0) in automotive industry requires new approaches to the managerial decisions making, thus the modelling of a control system becomes the most important part of the manufacturing optimization. In this paper, we present an assembly line simulation model with dynamically changing parameters that allows reacting quickly to the production system's changes. A software module has been developed to automatically perform such functions, as monitoring the operations (statuses) on positions and developing recommendations to organize logistical flows. The algorithm to determine the state of the assembly line's position is presented. Introduction of such approach in automotive industry will allow not only optimizing processes and improving product quality, but also establishing favorable conditions for the subsequent intellectualization of the automotive service.

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Keywords

Assembly line, Automotive industry, Control system, Industry 4.0, Intellectualization, Simulation

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